

CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Chronic obstructive pulmonary disease (COPD) is the fourth leading cause of death in the United States. COPD is a progressive lung disease in which the lung tissue becomes inflamed and thickened, destroying lung tissue and making it harder to breathe. As a result, COPD can cause serious long-term disability and increase one's risk for early death. COPD can include respiratory diseases, such as chronic bronchitis and emphysema.

Risk Factors for COPD

Although COPD symptoms can occur over time, there are certain behaviors and exposures that can increase one's risk.

Smoking

Smoking is one of the largest contributing factors to developing COPD. In fact, 85-90% of all cases are related to cigarette smoking. The chemicals and toxins from cigarettes can increase one's risk of developing COPD because of the damage that occurs to the lung tissue.

Environment

Daily environmental hazards that one is exposed to at work, home, and or in the community can affect one's risk for developing COPD. Exposure to certain irritants can damage the lungs and airways. Life-long exposure to general air pollution, secondhand smoke, dust particles, and chemical exposures can increase one's risk of developing COPD.

Genetics, Age, and Sex

A family history of COPD can increase the risk of developing COPD, especially if in addition to a personal history of smoking or other risk factors.

Since COPD usually occurs as a result of life-long exposure to toxins and the resulting damage, symptoms do not typically appear until about 40 years old. Women are more likely than men to suffer from COPD. Women's lungs are also smaller, and the increased levels of estrogen in women can increase the severity of COPD.

Other Conditions

Living with asthma, another chronic lung disease, can lead to COPD if untreated. In addition, those who have asthma and continue to smoke compound the risk of developing COPD.



Breathing Treatment for COPD.
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Symptoms of COPD

Early detection is important to reduce complications and to manage COPD successfully. Symptoms of COPD can include:

- Chronic cough
- Shortness of breath
- Frequent respiratory infections
- Blueness of the lips or fingernail beds
- Fatigue
- Increased production of phlegm or sputum (excess mucus)
- Wheezing

Treatment and Disease Management

Once diagnosed with COPD, there are several options for treatment, including medications, preventative immunizations, pulmonary therapy, and other therapies. In addition, management strategies can improve one's quality of life. It is important to communicate with one's primary care physician to develop tailored care and treatment plans for management.

Treatment

Bronchodilators, anti-inflammatories, and antibiotics are a few examples of medications that are often prescribed to treat COPD. Since people living with COPD already have compromised lung function, they are at an increased risk for developing other respiratory illnesses and developing more serious complications from the infections. As a result, some treatment plans may include vaccinations to prevent respiratory illnesses, such as influenza and pneumonia. Pulmonary rehabilitation includes education, nutrition advice, counseling, and exercise to increase one's activity level. The goal is to increase one's ability to be active while reducing the negative effects of COPD.

It is important to realize that there are many different treatment options available to improve the quality of life for someone living with COPD. Treatment plans vary on an individual basis and should be discussed with one's primary care physician to decide the best course of action.

Disease Management

In order to effectively manage COPD, one must protect the already damaged lungs from further damage by limiting exposure to irritants. This includes smoking cessation, avoiding secondhand smoke, reducing exposure to harmful particles/dust, and reducing exposure to pollution.

People living with COPD may benefit from practicing certain deep-breathing exercises to breathe more freely. These exercises help to improve breathing by "exercising" the lungs. Physical exercise can also help people living with COPD better manage their condition by improving circulation and strengthening respiratory muscles. It is important that patients follow recommendations provided by primary care providers to ensure safety during exercise.

Prevention of COPD

There is no known cure for COPD; therefore, prevention of the disease is crucial. Both modifiable and non-modifiable factors contribute to the development of COPD.

The non-modifiable factors such as genetics, age, sex, history of asthma, and some environmental exposures cannot be altered to reduce one's risk for COPD. Modifiable factors that influence one's risk, and can, therefore, be changed, are smoking and some environmental exposures. Smoking prevention,

smoking cessation, avoiding secondhand smoke when possible, and using protective breathing masks when at risk of exposure to dangerous fumes or particles can all reduce one's risk of developing COPD.

Since there are many contributing factors that cannot be prevented and or avoided, knowing one's risk, the signs, and the symptoms of COPD can lead to a quicker diagnosis. The sooner COPD can be detected and treated, the better one's quality of life can be.

Sources:

1. Chronic Obstructive Pulmonary Disease (COPD): American Lung Association. (n.d.). Retrieved from <https://www.lung.org/lung-health-diseases/lung-disease-lookup/copd>
2. COPD. (2020, April 15). Retrieved from <https://www.mayoclinic.org/diseases-conditions/copd/symptoms-causes/syc-20353679>
3. National Institutes of Health. "What Is COPD?" *National Heart, Lung, and Blood Institute*. U.S. Department of Health and Human Services, 31 July 2013. Web. 05 Oct. 2016.

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